

----- the newsletter of the Sinclair Computer Users Society -----
SINCUS NEWS
 1229 Rhodes Road
 Johnson City, New York 13790
 ----- since 1982 -----

In this issue is part two in the series on Ray Byler's Spectrum/TS2068 ROM directories. It is in four parts, the Spectrum ROM directory listed alphabetically and cross referenced to the TS2068. Then the TS2068 ROM is listed alphabetically and cross referenced to the Spectrum. The last two parts have the ROMs listed by address and cross referenced. With Spectrum programs so popular, one can (hopefully) determine the 2068 ROM call, and change it to run on ones TS2068.

Thanks to Tom Skapanski, Coram, NY; Harold Romer, Johnson City, TENN; and Richard Hurd, Seaside, OR; for RENEWING. It is a pleasure to welcome R. Arthur Bindin, Princeton, W.V. as a NEW member. Thanks to all the local members who RENEWEd this summer. Please check the mailing label, your subscription will expire with the notice under your address, "Last issue". We would be pleased to continue your subscription upon receipt of your \$8 check for another year of SINCUS NEWS.

NEWS-from Richard Hurd...from Jack Dohany "a Linger Board" is a RS232 video terminal board that emulates quite a few popular terminals. It allows the use of a IBM keyboard and composite or TTL monitors for a 80 x 25 line display. Cost assembled and tested \$138.95; kit is \$98.95; both include an option C PC-XT keyboard ROM and are PPD. Jack Dohany is customizing versions of the TS2068 and Spectrum ROMs to give us 80 column BASIC with an IBM keyboard. SYS 80 hopefully will be done around the end of this year for about \$30. The board is available from Digital Research Computers, PO Box 381450, Duncanville, TX 75138 tele: 214-225-2309, two weeks extra for assembled and tested. Jack Dohany's address is 390 Rutherford Ave., Redwood City, CA 94061

Again, no info from SNUG, is anything happening? Anyone home?

I reported meeting with Tim Woods, Time Design Magazine, at the CapitalFEST in May, and he assured one and all that he's in business and that we can look forward to many more issues of TDM. That was over 3 months ago, and TDM has still to come out with the second issue of 1989. TDM is run by Tim and his wife, and he has to spend much of his time with a family business. So unfortunately his subscribers and advertisers are left out. I encourage all TSers to support their vendors, perhaps some vendors could support their promises.

With much thanks to Herb Bowers, Sr. of ABBA Software and STING Graphics for the inclusion of their works into the public domain. Mr. Bowers has a Medicaid tax calculator program, which ought to warn the senior citizens up to how much Congress will tax them. Steve Spaulding sent his Graphics support package for the Pixel Print Program by Stan Lemke.

page 1.....NEWS	+	----- Meeting DATES 1989 -----
page 2.....Cool QL Tips by Hal Sohn	+	
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page 11.....QL tips Con't + CATprint.	+	OCT 18 Wednesday
page 12.....Club Notes, policy	+	NOV 15 Wednesday
	+	DEC 20 Wednesday

Support your TS supplier- if you have been + paying attention, the number of vendors has+ been steadily dropping- keep them healthy! +

the 3rd Wednesday of
the month

QL HEAT PROBLEM CORRECTED

by Hal Sohn, SINCUS

I have read many articles on correcting the over heating problem due to the 5.0V regulator (7805), which supplies the regulated 5.0V to the QL. When you look inside the QL, I wonder if SIR Clive's miniaturization caused more problems, than it was worth.

1) In correcting the problem with my QL, I decided to remove the source of the problem, the REGULATOR and its HEAT SINK. By removing the eight screws on the bottoms of the QL case and opening the QL, the only task to perform was to remove the one screw holding down the 5.0V regulator, and remove the regulator from its socket. With the regulator removed, the heat sink will now lift out. The only power components remaining which would add to any or very little heat is the regulator for the micro drives (2). See fig 1.

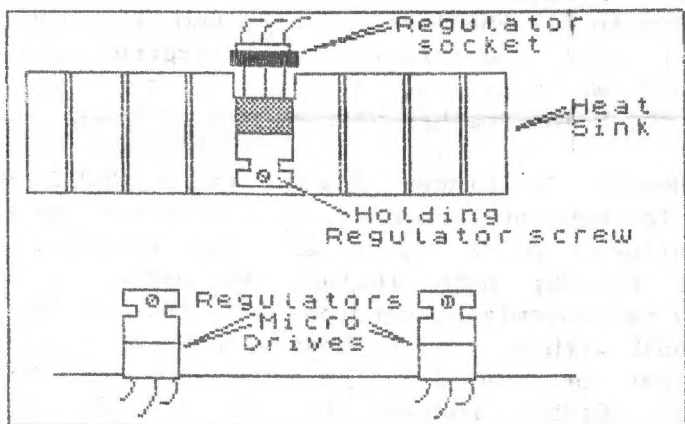


Figure 1.

regulator in place. This will now hold the new added wire and prevent the wire from coming loose. The remaining wire was fed through the opening in the QL, the opening used for the Network plug. This wire will be used as part of the old power cable. See fig. 2. This completes the modification to the QL. The remaining steps are to add the 5.0V regulator to the QL externally, as part of the power cable as shown in fig. 3.

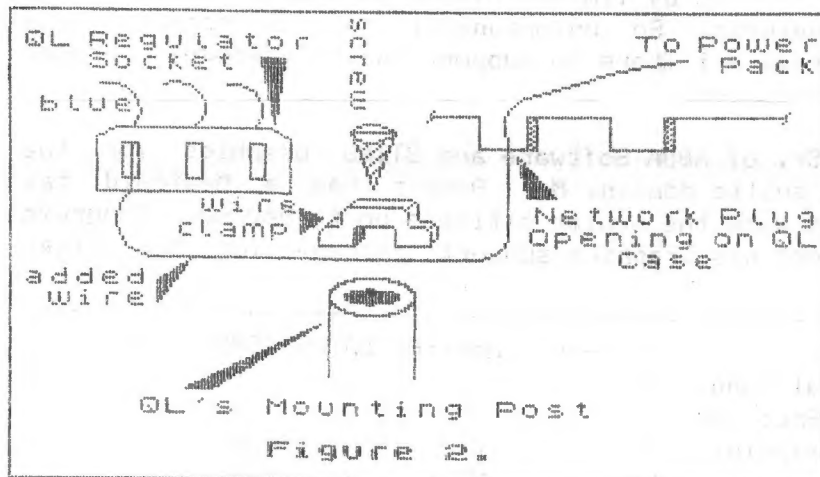


Figure 2.

2) Obtain a wire about the length of the cable from the POWER PACK to the QL. Strip one end of the wire and insert the striped end into the input slot of the regulator socket, see fig. 2. I then cut a small piece of conductor lead from a old IC and soldered the striped end of the wire to it, and then inserted it into the regulator socket. Using a small wire clamp (plastic), the wire was then fastened using the screw which was used to hold the

3) POWER CABLE: Measure about 6" to 10" on the power cable, from the Power Pack end. Cut the cable at this point. This is the point where the 5.0V regulator will be inserted and connected. The regulator will now be in series with the QL, and part of the power cable.

4) PARTS needed: 1 mini box the size to hold the regulator heat sink or larger. 2 Rubber grommets, inner hole size, for the power cable.

2 capacitors; a .1uf 35v and a 1000 uf 35v. NOTE: I used a different regulator, a UA323 with a higher current rating (3A). The original regulator (7805) with its QL heat sink will work fine. (Con't on page 11)

The following is the second part of a four part catalog of the Spectrum and TS2068 ROMs comes to you through the efforts of:

Ray Byler, June 1988, Fort Riley, Kansas

TS2068 ROM ENTRY POINTS INDEXED ALPHABETICALLY

- UNNAMED ENTRY POINTS -

TS2068 NAME	HEX	DEC	SPECTRUM NAME	HEX	DEC
(Add BASIC Line	1158	04440	MAIN-ADD	155D	05469
(Add Spaces/No)	1676	05750	OUT-SP-NO	192A	06442
(Adjst fr Prtr)	0708	01800	PD-ALL-6	0BD3	03027
(BC Workspaces)	0030	00048	BC-SPACES	0030	00048
(Bank Switch Cd	17B5	06069	-----	-----	-----
(Channel Flags)	1293	04755	(Chan Code Tbl)	162D	05677
(Check Memory)	0D40	03392	RAM-CHECK	11DA	04570
(Chk for Sprtr)	1AB2	06834	SEPARATOR	1B6F	07023
(Cl Attributes)	09C3	02499	CL-ATTR	0E8B	03720
(Class 3 Cnds)	1B70	07024	CLASS-03	1C0D	07181
(Close Strm Sub	140D	05133	CLOSE-STR	171C	05916
(Clse Strm Tbl)	1407	05127	(Clse Strm Tbl)	1716	05910
(Cmd Class Tbl)	1B64	07012	(Cmd Class Tbl)	1C01	07169
(Cmd Offsets)	1945	06469	(Cmd Offsets)	1A48	06728
(Control Chrs)	007D	00125	SKIP-OVER	007D	00125
(Ctrl Char Tbl)	0528	01320	(Ctrl Char Tbl)	0A11	02577
(Cursor Down)	0B59	02905	ED-DOWN	0FF3	04083
(Cursor Left)	0B6D	02925	ED-LEFT	1007	04103
(Cursor Right)	0B72	02930	ED-RIGHT	100C	04108
(Cursor Up)	0BBF	03007	ED-UP	1059	04185
(Delete Command	20D1	08401	-----	-----	-----
(Dif of Length)	1745	05957	DIFFER	19DD	06621
(Do Edit)	0B0F	02831	ED-EDIT	0FA9	04009
(Edit Error)	0BE5	03045	ED-ERROR	107F	04223
(Edit Keys Tbl)	0B06	02822	(Edit Keys Tbl)	0FA0	04000
(Edit Mode Lp)	0E28	03624	MAIN-EXEC	12A2	04770
(End Edit)	0BB4	02948	ED-IGNORE	101E	04126
(Error-2)	0053	00083	ERROR-2	0053	00083
(Ex Mode Ltrs)	0268	00616	(Ex Mode Ltrs)	022C	00556
(Expand Chars)	069A	01690	PD-CHAR	0B65	02917
(FP Calculator)	0028	00040	FP-CALC	0028	00040
(Find Line No.)	131E	04894	LINE-ZERO	168F	05775
(Fnd # Newline)	1B15	06933	LINE-USE	1BBF	07103
(Fnd Adrs Newln	1AEC	06892	LINE-NEW	1B9E	07070
(Free Command)	2934	10548	-----	-----	-----
(Ftch Add Nxtln	1B09	06921	LINE-END	1BB3	07091
(Get Character)	0018	00024	GET-CHAR	0018	00024
(Get Cmd Class)	1A95	06805	SCAN-LOOP	1B52	06994
(Get DF Address)	09D6	02518	CL-ADDR	0E9B	03739
(Get Nxt Char)	0020	00032	NEXT-CHAR	0020	00032
(If Command)	1C5B	07259	IF	1CF0	07408
(In Command)	3864	14436	(In Command)	34A5	13477
(Ink - Dver)	0584	01412	PD-TV-2	0A6D	02669
(Invlid I/O Dev)	11BF	04543	REPORT-J	15C4	05572
(Jmp to TADDR)	1B79	07033	JUMP-C-R	1C16	07190
(Key Repeat Fn)	0336	00822	K-REPEAT	0310	00784
(Keyboard Int)	0048	00072	KEY-INT	0048	00072
(Ld Data Block)	X5C6	X1478	LD-BLOCK	0802	02050

TS2068 ROM ENTRY POINTS INDEXED ALPHABETICALLY

TS2068 NAME	HEX	DEC	SPECTRUM NAME	HEX	DEC
(Loc Wrk Space)	0CF6	03318	SET-HL	1190	04496
(Maskable Int)	0038	00056	MASK-INT	0038	00056
(NMI Ext Int)	0066	00102	RESET	0066	00102
(New Key)	0317	00791	K-NEW	02F1	00753
(On Err Command)	2080	08320	-----	-----	-----
(Open K Strm)	14CE	05326	OPEN-K	1781	06017
(Open P Stream)	14D6	05334	OPEN-P	1789	06025
(Open S Stream)	14D2	05330	OPEN-S	1785	06021
(Opn Strm Tbl)	14C7	05319	(Opn Strm Tbl)	177A	06010
(Out Command)	1F04	07940	OUT	1E7A	07802
(P-Bfr Fetch)	0634	01588	PO-F-PR	0B1D	02845
(Peek Command)	386B	14443	(Peek Command)	34AC	13484
(Poke Command)	1F0A	07946	POKE	1E80	07808
(Print Chars)	05F0	01520	PO-ABLE	0AD9	02777
(Print Chars)	063B	01595	PO-ANY	0B24	02852
(Print Comma)	0576	01398	PO-COMMA	0A5F	02655
(Print Error)	0008	00008	ERROR-1	0008	00008
(Print Line)	1683	05763	OUT-CHAR	1937	06455
(Print a "?")	0580	01408	PO-QUEST	0A69	02665
(Print a Char)	06B4	01716	PR-ALL	0B7F	02943
(Prnt Char/Tkn)	1671	05745	OUT-SP-2	1925	06437
(Put Cursor)	0B97	02967	ED-EDGE	1031	04145
(Read after 1st)	1D96	07574	READ-3	1DEC	07660
(Rem Command)	1B00	06912	REM	1BB2	07090
(Report B)	04AA	01194	REPORT-B	046C	01132
(Restore Comman)	1E9D	07837	RESTORE	1E42	07746
(Restre ERR-SP)	0B8A	02954	ED-ENTER	1024	04132
(Run Command)	1F2B	07979	RUN	1EA1	07841
(Save Lwr Scrn)	0607	01543	PO-ST-E	0AF0	02800
(Save Prnt Bfr)	0613	01555	PO-ST-PR	0AFC	02812
(Scanning Func)	296D	10605	S-U-PLUS	25AF	09647
(Scanning Loop)	0288	00696	KEY-LINE	0296	00662
(Scroll? Msg)	0833	02099	(Scroll? Msg)	0CF8	03320
(Search Table)	077C	01916	PO-SEARCH	0C41	03137
(Series Gen Sub)	3808	14344	SERIES-06-ETC.	3449	13385
(Set K Flags)	129A	04762	CHAN-K	1634	05684
(Set Nxtln use)	1B27	06951	NEXT-LINE	1BD1	07121
(Set P Flags)	12B3	04787	CHAN-P	164D	05709
(Set S Flags)	12A8	04776	CHAN-S	1642	05698
(Skip Over No.)	1602	05634	NUMBER	1BB6	06326
(Stick Command)	28FB	10488	-----	-----	-----
(Sym & Grph Cd)	0BD7	03031	ED-SYMBOL	1076	04214
(Test Strm No.)	140F	05135	STR-DATA	171E	05918
(Test Variable)	2A87	10887	S-LETTER	26C9	09929
(Test for Ink)	239C	09116	CO-TEMP-3	21F2	08690
(Timex Logo)	111B	04376	(Sinclair Logo)	15C9	05577
(Tone Table)	04AC	01196	(Tone Table)	046E	01134
(Tst Character)	001C	00028	TEST-CHAR	001C	00028
(Tst fr Clr Cd)	238B	09099	CO-TEMP-1	21E1	08673
(Verify Command)	X58F	X1423	VR-CONTROL	07CB	01995

- NAMED ENTRY POINTS -

TS2068 NAME	HEX	DEC	SPECTRUM NAME	HEX	DEC
ACS	3C5E	15454	ACS	3843	14403
ADD	33D3	13267	ADDITION	3014	12308
AKEY	X8AA	X2218	WAIT-KEY	15D4	05588
ALNUM?	3046	12358	ALPHANUM	2C8B	11400
ALPHA?	304B	12363	ALPHA	2C8D	11405
ANGLE	3B9E	15262	GET-ARGT	3783	14211
AROS	18C6	06342	-----	-----	-----
ARRAY	37C5	14277	LDC-MEM	3406	13318
AR_LN	17EA	06122	-----	-----	-----
AR_NXT	17FF	06143	-----	-----	-----
ASN	3C4E	15438	ASN	3833	14387
ATN	3BFD	15357	ATN	37E2	14306
ATTBYT	0710	01808	PD-ATTR	0BDB	03035
BEEP	0436	01078	BEEP	03FB	01016
BLDSCT	X9F4	X2548	-----	-----	-----
BORDER	243E	09278	BORDER	2294	08852
BREAK?	2009	08201	BREAK-KEY	1F54	08020
CALC	3684	13956	STK-ZERO	32C5	12997
CALL_B	XF99	X3993	-----	-----	-----
CAT	25CB	09672	CAT-ETC.	1793	06035
CHCODE	0371	00881	K-DECODE	0333	00819
CHINIT	11AA	04522	(Init Chan Info	15AF	05551
CHK_SZ	1FBB	08123	TEST-ROOM	1F05	07941
CHNG_V	XE8E	X3726	-----	-----	-----
CH_SET	3D00	15616	(Char Dot Ptrns	3D00	15616
CIRCLE	2679	09849	CIRCLE	2320	08992
CLCHAN	13BE	05054	CLOSE-2	1701	05889
CLDFIL	XE27	X3623	-----	-----	-----
CLEAR	1F36	07990	CLEAR	1EAC	07852
CLEL	133F	04927	SET-MIN	16B0	05808
CLLHS	08A9	02217	CLS-LOWER	0D6E	03438
CLOSE	139F	05023	CLOSE	16E5	05861
CLPR	0A35	02613	CLEAR-PRB	0EDF	03807
CLR_BC	1F39	07993	CLEAR-RUN	1EAF	07855
CLS	08EA	02282	CL-ALL	0DAF	03503
CLS_B	097F	02431	CL-LINE	0E44	03652
COLITM	23A6	09126	CO-TEMP-4	21FC	08700
COLOUR	23DE	09182	CO-TEMP-7	2234	08756
CONT	1EE4	07908	CONTINUE	1E5F	07775
COS	3BC5	15301	COS	37AA	14250
CP_BC	16E8	05864	CP-LINES	1980	06528
CTRD	371A	14106	CALCULATE	335B	13147
DATA	1E82	07810	DATA	1E27	07719
DEF	201D	08221	DEF-FN	1F60	08032
DELREC	1750	05968	RECLAIM-2	19E8	06632
DELSYM	0B7B	02939	ED-DELETE	1015	04117
DEL_DE	174D	05965	RECLAIM-1	19E5	06629
DEL_K	0BFD	03069	CLEAR-SP	1097	04247
DESLUG	0D0D	03341	REMOVE-FP	11A7	04519
DE_HL	1668	05736	LN-STORE	191C	06428

	TS2068	NAME	HEX	DEC	SPECTRUM	NAME	HEX	DEC
DIGIT?	30D9		12505	NUMERIC		2D1B	11547	
DIM	2FC0		12224	DIM		2C02	11266	
DIVIDE	356E		13678	DIVISION		31AF	12719	
DRAW	26DB		09947	DRAW		2382	09090	
DRAWLN	2B13		10259	(Compare X&Y)		24BA	09402	
DRAW_L	2810		10256	DRAW-LINE		24B7	09399	
DUMPPR	0A23		02595	COPY-BUFF		0ECD	03789	
DYADIC	1BDC		07132	NEXT-2NUM		1C79	07279	
ECHO	0C83		03203	ED-COPY		111D	04381	
EDIT_K	0A82		02690	EDITOR		0F2C	03884	
END?	1B44		06980	CHECK-END		1BEE	07150	
ENDSTT	1AB9		06841	STMT-RET		1B76	07030	
ENDTEM	1B4A		06986	STMT-NEXT		1BF4	07156	
ERASE	25D4		09684	CAT-ETC.		1793	06035	
ERR2	1B91		07057	REPORT-2		1C2E	07214	
ERR4	1FCF		0B143	REPORT-4		1F15	07957	
ERR5	07C1		01985	REPORT-5		0C86	03206	
ERR6	356C		13676	REPORT-6		31AD	12717	
ERRB	1F29		07977	REPORT-B		1E9F	07839	
ERRH	237E		09086	REPORT-H		21D4	08660	
ERRO	123D		04669	REPORT-O		160E	05646	
EXECUTE	1ADB		06872	LINE-RUN		1B8A	07050	
EXINIT	XBE7		X2279	-----		-----	-----	
EXP	3ADF		15071	EXP		36C4	14020	
EXPRN	2854		10324	SCANNING		24FB	09467	
FIND_L	16D6		05846	LINE-ADDR		196E	06510	
FIND_N	2C70		11376	LOOK-VARS		28B2	10418	
FIX_U	1F23		07971	FIND-INT2		1E99	07833	
FIX_U1	1F1E		07966	FIND-INT1		1E94	07828	
FLASHA	160D		05645	OUT-FLASH		18C1	06337	
FLOAT	3656		13910	RE-STACK		3297	12951	
FOR	1C78		07288	FOR		1D03	07427	
FORMAT	25CC		09676	CAT-ETC.		1793	06035	
FP2A	3193		12691	FP-TD-A		2DD5	11733	
FP2BC	3160		12640	FP-TD-BC		2DA2	11682	
F_ATTR	28D7		10455	S-ATTR-S		2580	09600	
F_INKY	29F2		10738	S-INKEY\$		2634	09780	
F_PI	29E5		10725	S-PI		2627	09767	
F_PNT	2624		09764	POINT-SUB		22CB	08907	
F_SCRN	288E		10382	S-SCRN\$-S		2535	09525	
GETAL	17CF		06095	-----		-----	-----	
GET_A	266D		09837	STK-TD-A		2314	08980	
GET_EL	2D54		11604	STK-VAR		2996	10646	
GET_LN	1324		04900	LINE-NO		1695	05781	
GET_XY	2660		09824	STK-TD-BC		2307	08967	
GOTO_2	1EFD		07933	GO-TD-2		1E73	07795	
GOTO_B	XF8A		X3978	-----		-----	-----	
GO_SUB	1F99		08089	GO-SUB		1EED	07917	
GR_COL	238C		09100	CO-TEMP-2		21E2	08674	
HIFLSH	241D		09245	CO-TEMP-C		2273	08819	
INCH	11E1		04577	INPUT-AD		15E6	05606	
ININT	30F9		12537	INT-TD-FP		2D3B	11579	

TS2068 NAME	HEX	DEC	SPECTRUM NAME	HEX	DEC
INIT	0D31	03377	START/NEW	11CB	04555
INPUT	222B	08747	INPUT	2089	08329
INS1	12B8	04792	ONE-SPACE	1652	05714
INSA	0AE7	02791	ADD-CHAR	0F81	03969
INSERT	12BB	04795	MAKE-ROOM	1655	05717
INT	3ACA	15050	INT	36AF	13999
INTDIV	3ABB	15035	N-MOD-M	36A0	13984
INTPT?	2889	10377	SYNTAX-Z	2530	09520
IN_K	0C0E	03086	KEY-INPUT	10A8	04264
I_SEQ	226B	08811	IN-ITEM-1	20C1	08385
JUMP	1EF1	07921	GO-TO	1E67	07783
KSCAN	0227	00551	(Key Tables)	0205	00517
K_BASE	035C	00860	K-TEST	031E	00798
K_CLS	08A6	02214	CLS	0D6B	03435
K_DUMP	0A02	02562	COPY	0EAC	03756
K_LIST	1545	05445	LIST	17F9	06137
K_LLST	1541	05441	LLIST	17F5	06133
K_LPR	2155	08533	LPRINT	1FC9	08137
K_NEW	0D1D	03357	NEW	11B7	04535
K_PRIN	2159	08537	PRINT	1FCD	08141
K_SCAN	02B0	00688	KEY-SCAN	028E	00654
LCU2	132D	04909	RESERVE	169E	05790
LDDE	313D	12605	INT-FETCH	2D7F	11647
LDMES	3CA9	15529	(Program: msg)	09C1	02497
LDTVCU	061A	01562	PO-FETCH	0B03	02819
LE3	0055	00085	ERROR-3	0055	00085
LED18	0E2F	03631	MAIN-1	12A9	04777
LED4	0E8D	03725	MAIN-4	1303	04867
LET	2EBD	11965	LET	2AFF	11007
LINENO	1768	05992	E-LINE-NO	19FB	06651
LIST	14E1	05345	AUTO-LIST	1795	06037
LN	3B2E	15150	LN	3713	14099
LOAD	X5CC	X1484	LD-CONTRL	0808	02056
LPO	15AC	05548	(LD D,0)	1860	06240
LS4	1A44	06724	STMT-LOOP	1B28	06952
LT22	1BBC	07100	VAL-FET-2	1C59	07257
L_NUM	2F17	12055	L-NUMERIC	2B59	11097
MERGE	X6E5	X1765	ME-CONTRL	08B6	02230
MOVE	25D0	09680	CAT-ETC.	1793	06035
MULT	3468	13416	HL=HL*DE	30A9	12457
NC_HL	0077	00119	TEMP-PTR1	0077	00119
NEGATE	382D	14381	NEGATE	346E	13422
NEW	0D7F	03455	RAM-SET	1219	04633
NEWDEV	24D2	09426	-----	-----	-----
NEXT	1D55	07509	NEXT	1DAB	07595
NEXTCH	0074	00116	CH-ADD+1	0074	00116
NEXT_L	165B	05723	LN-FETCH	190F	06415
NOTKB?	2380	09088	IN-CHAN-K	21D6	08662
NXT_HL	2C69	11369	FN-SKPOVR	2BAB	10411
OPCHAN	1465	05221	OPEN-2	175D	05981
OPDFIL	XDB0	X3504	-----	-----	-----
OPEN	142A	05162	OPEN	1736	05942

TS2068	NAME	HEX	DEC	SPECTRUM NAME	HEX	DEC
	DPTNO	1C49	07241	FETCH-NUM	1CDE	07390
	OUTPUT	31A1	12705	PRINT-FP	2DE3	11747
	PAEDCB	2E74	11892	STK-STORE	2AB6	10934
	PARP	03F3	01011	BEEPER	03B5	00949
	PASSEM	25B9	09657	-----	-----	-----
	PASSIN	XF43	X3907	-----	-----	-----
	PAUSE	1FEB	08171	PAUSE	1F3A	07994
	PHLAF	004F	00079	(Pop HL & AF)	004F	00079
	PLOT	2635	09781	PLOT	22DC	08924
	PLOTBC	263E	09790	PLOT-SUB	22E5	08933
	PLUGIN	0000	00000	START	0000	00000
	POPSTR	2FAF	12207	STK-FETCH	2BF1	11249
	PRSCAN	0A4A	02634	COPY-LINE	0EF4	03828
	PR_CUR	162D	05677	OUT-CURS	18E1	06369
	PR_TV2	0776	01910	PO-SAVE	0C3B	03131
	PSHSTR	2E70	11888	STK-STD-\$	2AB2	10930
	PUT	15C9	05577	OUT-LINE2	187D	06269
	PUTDIG	11EA	04586	OUT-CODE	15EF	05615
	PUTMES	073F	01855	PO-MSG	0C0A	03082
	PUT_BC	1788	06024	OUT-NUM-1	1A1B	06683
	PUT_LN	1795	06037	OUT-NUM-2	1A28	06696
	PUT_SR	15A1	05537	OUT-LINE	1855	06229
	P_LFT	053A	01338	PO-BACK1	0A23	02595
	P_NL	0566	01382	PO-ENTER	0A4F	02639
	P_RT	0554	01364	PO-RIGHT	0A3D	02621
	P_SEQ	217E	08574	PRINT-2	1FDF	08159
	RAMNO	377F	14207	MOVE-FP	33C0	13248
	RAND	1ED4	07892	RANDOMIZE	1E4F	07759
	RDCH	11CF	04559	WAIT-KEY	15D4	05588
	RD_BIT	X189	X0393	LD-EDGE-2	05E3	01507
	READ	1D97	07575	READ	1DED	07661
	RECLEN	1720	05920	NEXT-ONE	19B8	06584
	REMGSZ	12CA	04810	POINTERS	1664	05732
	RESET	1354	04948	SET-STK	16C5	05829
	RESSCT	XC4C	X3148	-----	-----	-----
	RESTBC	1ECA	07882	REST-RUN	1E45	07749
	RETURN	1FD4	08148	RETURN	1F23	07971
	RND	29B6	10678	S-RND	25F8	09720
	ROOM?	3768	14184	TEST-5-SP	33A9	13225
	ROOT	3C65	15461	SQR	384A	14410
	RPTMSG	0F65	03941	(Report Msgs)	1391	05009
	RSET	2454	09300	-----	-----	-----
	RSTSTR	13A8	05032	(Make Strm Dt=0	16EB	05867
	R_ATTS	0888	02184	TEMPS	0D4D	03405
	R_EDGE	X18D	X0397	LD-EDGE-1	05E7	01511
	R_TAPE	X0FC	X0252	LD-BYTES	0556	01366
	SAVE	X851	X2129	SA-CONTRL	0970	02416
	SCRL	0939	02361	CL-SC-ALL	0DFE	03582
	SCRMBL	2603	09731	PIXEL-ADD	22AA	08874
	SEARCH	136B	04971	INDEXER	16DC	05852
	SELECT	1230	04656	CHAN-OPEN	1601	05633
	SEL_HL	1248	04680	CHAN-FLAG	1615	05653

TS2068	NAME	HEX	DEC	SPECTRUM NAME	HEX	DEC
SENDCH		11ED	04589	PRINT-A-2	15F2	05618
SENDTV		0500	01280	PRINT-OUT	09F4	02548
SEPRMT		3C89	15497	(Cassette Msgs)	09A1	02465
SETCUR		0914	02324	CL-SET	0DD9	03545
SETTVC		0914	02324	CL-SET	0DD9	03545
SET_AT		05B2	01458	(AT Ctrl Char)	0A9B	02715
SHIFT		339C	13212	SHIFT-FP	2FDD	12253
SIN		3BD0	15312	SIN	37B5	14261
SKIP		1D28	07464	LOOK-PROG	1D86	07558
SKIPIT		2569	09577	-----	-----	-----
SLICER		2E10	11792	SLICING	2A52	10834
SLVM		X1AB	X0427	SAVE-ETC	0605	01541
SINIT		11C1	04545	(Init Strm Data	15C6	05574
SOUND		2128	08488	-----	-----	-----
SRCHSC		1374	04980	-----	-----	-----
STBOOL		3926	14630	FP-0/1	350B	13579
STDE_S		314C	12620	INT-STORE	2D8E	11662
STDE_U		314A	12618	P-INT-STO	2D8C	11660
STKUSN		3059	12377	DEC-TO-FP	2C9B	11419
STK_0		1C51	07249	USE-ZERO	1CE6	07398
STK_A		30E6	12518	STACK-A	2D28	11560
STK_BC		30E9	12521	STACK-BC	2D2B	11563
STK_M		3773	14195	STACK-NUM	33B4	13236
STOP		1C59	07257	STOP	1CEE	07406
STRITD		220F	08719	STR-ALTER	2070	08304
STTVCU		05F3	01523	PO-STORE	0ADC	02780
SUB		33CE	13262	SUBTRACT	300F	12303
SUBLIN		16F0	05872	(Fnd Stmt Sub)	1988	06536
SUBLN1		16F3	05875	EACH-STMT	198B	06539
SUMS		335A	13146	PREP-ADD	2F9B	12187
SUMSLD		3379	13177	FETCH-TWO	2FBA	12218
SYNERR		1BED	07149	REPORT-C	1C8A	07306
SYNTAX		1A27	06695	LINE-SCAN	1B17	06935
SYNTWO		214F	08527	UNSTACK-Z	1FC3	08131
TAN		3BF5	15349	TAN	37DA	14298
TC_HL		0078	00120	TEMP-PTR2	0078	00120
TEM1		1B82	07042	CLASS-01	1C1F	07199
TEM10		1BEF	07151	EXPT-EXP	1C8C	07308
TEM6		1BE5	07141	EXPT-1NUM	1C82	07298
TEMP3B		19E0	06624	P-SAVE	1ADF	06879
TFMP39		19E1	06625	P-LOAD	1AE0	06880
TERM?		21E7	08679	PR-ST-END	2048	08264
TEST0		3904	14596	TEST-ZERO	34E9	13545
TIMES		3489	13449	MULTIPLY	30CA	12490
TOKENS		0098	00152	(Token Table)	0095	00149
TO_THE		3C6C	15468	TO-POWER	3851	14417
TRUNC		35D3	13779	TRUNCATE	3214	12820
TVFUL?		0790	01936	PO-SCR	0C55	03157
TV_COL		23BB	09147	CO-TEMP-5	2211	08721
UPD_K		02E1	00737	KEYBOARD	02BF	00703
USRRET		3882	14466	-----	-----	-----
WRCH		0010	00016	PRINT-A-1	0010	00016

TS2068 NAME	HEX	DEC	SPECTRUM NAME	HEX	DEC
W_BORD	X0E5	X0229	SA/LD-RET	053F	01343
W_TAPE	X068	X0104	SA-BYTES	04C2	01218
XBASIC	X000	X0000	-----	-----	-----
XKEY	310D	12557	E-TO-FP	2D4F	11599
X_CALC	134E	04942	SET-WORK	16BF	05823
X_T_HL	1363	04963	REC-EDIT	16D4	05844

* The Timex 2068 Technical manual lists:

TSNAME	HEX
DELSYM	0B7E
NEW	0D82
LDMES	3CAB

H.E. Weppler (Sep 85 CATS Newsletter) lists:

TSNAME	HEX	SPNAME	HEX
DELSYM	0B7E	(ED-DELETE)	1016
NEW	0D82	(RAM-SET)	1219
INPUT	222B	(INPUT)	208E
CALC	3684	(? STK-ZERO)	3254
LDMES	3CAB	(Program: Msg)	09C<4(4

Following Mscript (TAPE ONLY) files are Spectrum (SP) and TS2068 (T) listings of ROM entry points.

SPNAM1ASC		ü	Explanations of
SPNAM2ASC	SP = Spectrum	ü	file names;
TSNAM1ASC	TS = TS2068	ü	Each file has a 1 and 2
TSNAM2ASC	NAM = NAMES	ü	to compose an entire
TSADD1ASC	ADD = Addresses	ü	listing, you may list
TSADD2ASC	1 = odd numbered pages	ü	and print as you
SPADD1ASC	2 = even numbered pages	ü	wish.
SPADD2ASC	ASC = ASCII		

The original work was done by Ray Byler on his Kaypro computer using dBase to list the ROM entry points. Then he used dBase to produce four sorted files. Each file was split in two for even and odd numbered pages using Wordstar. The files were then transmitted back to his TS2068 via the serial port on the Kaypro and the Z-SIO RS232 card on the TS2068. The page numbering was set up to be printed on a 2040 printer with Z-term64/Z-SIO card.

Ray provided SINCUS with a printed copy of the output, and a tape of the listings. I converted from tape to disc and removed extra lines added to the Mscript listings by Wordstar. Due to a possible difference in tape head azimuths there were many attempts at before getting a clean load.

The files are now on Oliger discs, DSDD, 5.25", I doubt I can make copies of the original tape, but if you really wanted it, I could make a tape copy from the disc version. Please enclose \$2.00 per disc, \$3.00 per tape, to this newsletter. If you want to print with an 80 column printer, the odd number pages could be printed down the left side of the pages, then roll the form feed back, set the left margin for about midway of the paper and then print all the even number pages then the listing should follow through page after page in double columns of 64 characters each. (in compressed type)

Contact Ray at PO Box 2312, Ft. Riley, KS 66442 or us at SINCUS, 1229 Rhodes Rd., Johnson City, NY 13790

(Con't from page 2) QL Heat Problem Corrected

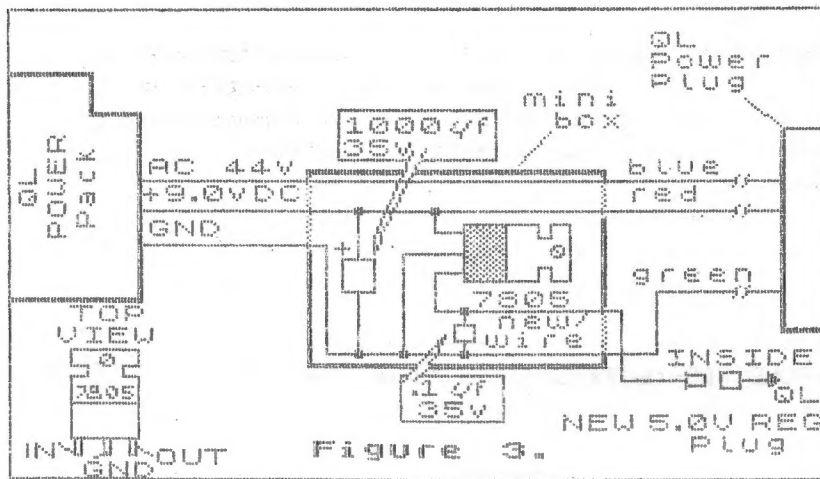


Figure 3.

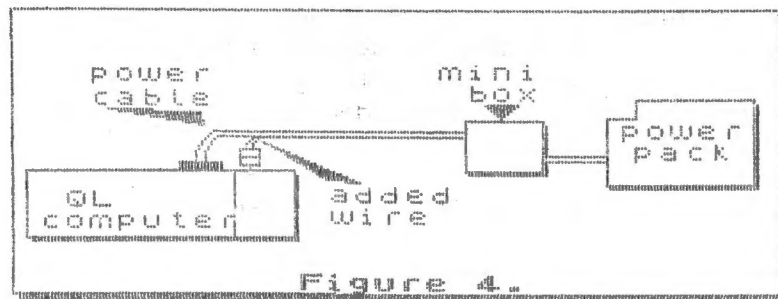


Figure 4.

5) On each end of the mini box, drill a hole and insert the grommet. Mount the heat sink to the outside of the mini box (top). Insert each end of the cut power cable into each hole of the mini box and wire as per drawing. See fig. 3. It should only be done by a person, with a background in electronics. I did not go into detail on dimensions, you may want to mount the regulator and heat sink some other way. The extra wire was taped to the power cable and a small plug was used for a quick disconnect at the QL. The main idea was to show how to remove the regulator from the inside of the QL. The QL now runs COLD.



The above art work is on our swap 105 in the program TED. For some reason when I am making a SCREEN\$ COPY, I get an Out of Screev error message, annoying at best!! Waste a few stencils for thew repro copies.

```

1 REM CATPRINT J. Colonna
SINCUS
This program lprints the
disk catalog for Oliger
systems.

5 LET /p=0: POKE 23324,10:
REM Sets Print Driver and adds
a line feed for Oliger
system - eliminate the POKE
statement if line feed is
not needed.

10 BORDER 1: PAPER 1: INK 7: C
LS
20 PRINT "*****To LPRINT
the Current Disk";";" CA
TALOG Press "; INVERSE 1;"<ENTE
R>"
30 PAUSE 0
40 OPEN #2,"P": CAT /: CLOSE #
2
50 PRINT #0;"Press ENTER for a
nother copy or insert new disk a
nd press ENTER"
60 GO TO 30
    
```

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SINCUS will leave messages on HAM-BONE BBS-(607)754-7498 "J-8" 8-N-1 24hrs 3-1200B as of 9-01-89 this BBS is uncertain - cannot logon - believe it is unattended

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Thanks to Ray Byler, John Colonna and Hal Sohn for their help with the input to this edition.

In the Sept. 89 issue of the "PLOTTER", several pages are devoted to the TSEN- the Timex Sinclair Electronic Newsletter by Greg Popovich, New Jersey 201-956-7703 (BBS 8-1-N); 201-956-1556 (voice) FidoNet 1:107/564. First issue of TSEN was launched Feb 10, 1989. It is available on the Timex echo on FidoNet Backbone. Leave your node ID. Also available on W.Y.S.I.W.Y.G RBBS for DLing. Size to be under 25K. INPUT also needed.

SINCUS DISC/tape SWAPS for the TS2068 are still growing- five discs available and the sixth under construction. Available in Oliger or Larken Formats ONLY in 40 track, 5.25" discs. Get all five for \$10.00, or \$2.50 per disc for orders less than 5 discs. Special deal- one swap disc for \$1.00 and three Public Domain programs (YOURS or outa a magazine and give credit where due- send for list of our programs, dupilcates don't count). Send for disc catalogs, enclose an SASE. Send for a Sample disc and catalog enclose \$2.00. For Oliger swaps write John Colonna, 28 Guilfoyle Ave., Binghamton, NY 13903. For LKDOS swaps write to Paul Hill, 1229 Rhodes Rd., Johnson City, NY 13790. Make checks payable to SINCUS.

CLONE- a TS2068 tape copier (2 modes) and a header reader. On other side of tape are a couple swap samples. (TAPE ONLY) \$5. PPD.

COMPUTUS INTERRUPTUS- a multipart article on the 2068, includes programs, projects and artwork. Printed out, over 60 pages. Two printed copies left only \$15 each. Also available on LKDOS and Oliger discs - 5.25 DSDD only \$5. Make checks to SINCUS, write to Paul Hill, 1229 Rhodes Rd., Johnson City, NY 13790.